

CLAIMS

- 1 1. A video amplifier comprising:
 - 2 a first filter stage having an input terminal adapted to receive an RF signal and an output terminal;
 - 3 an attenuator having an input terminal coupled to the output terminal of said first filter stage and an output terminal, said attenuator comprising a temperature sensitive device; and
 - 4 a second filter stage having an input terminal coupled to the output terminal of the attenuator and an output terminal at which an output signal of said video amplifier is provided.
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- 11 2. The video amplifier of claim 1 wherein said temperature sensitive device is a thermistor.
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- 14 3. The video amplifier of claim 1 wherein each of said first filter stage and said second filter stage comprises a Sallen-Key filter.
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- 17 4. The video amplifier of claim 1 wherein each of said first filter stage and said second filter stage has a low-pass characteristic.
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- 19 5. The video amplifier of claim 1 wherein each of said first filter stage and said second filter stage has a bandpass characteristic.

1 6. A radar receiver comprising:
2 an RF amplifier having an input terminal adapted to receive an RF signal and an output
3 terminal at which an amplified RF signal is provided;
4 a down-converter having an input terminal coupled to said output terminal of said RF
5 amplifier and an output terminal at which a lower frequency signal is provided; and
6 a video amplifier having an input terminal coupled to said output terminal of said down-
7 converter and an output terminal at which a filtered signal is provided, wherein said video
8 amplifier comprises a temperature compensating attenuator.

0 01 7. The radar receiver of claim 6 wherein said RF amplifier is comprised of GaAs transistors.

0 02 8. The radar receiver of claim 6 wherein said attenuator comprises a thermistor.

0 03 9. The radar receiver of claim 8 wherein said attenuator further comprises at least one
0 04 resistor coupled to said thermistor to form a voltage divider.

0 05 10. The radar receiver of claim 6 said video amplifier further comprises:
1 a first filter stage having an input terminal coupled to said output terminal of said down-
2 converter and an output terminal coupled to said temperature compensating attenuator; and
3 a second filter stage having an input terminal coupled to said temperature compensating
4 attenuator and an output terminal at which said filtered signal is provided.

1 11. The radar receiver of claim 9 wherein each of said first filter stage and said second filter
0 2 stage has a bandpass characteristic.

1 12. The radar receiver of claim 11 wherein said bandpass characteristic has a low frequency
0 2 cutoff selected to attenuate a leakage signal.

1 13. The radar receiver of claim 11 wherein said bandpass characteristic has a low frequency
0 2 cutoff selected to attenuate a received RF signal reflected by an object located more than a
3 predetermined distance from said RF receiver.

1 14. A radar system comprising:
0 2 a transmit antenna for transmitting a first RF signal;
1 3 a receive antenna for receiving a second RF signal; and
2 4 a receiver circuit coupled to said receive antenna for processing said second RF signal
3 5 and comprising a temperature compensated video amplifier.

1 15. The radar system of claim 14 wherein said temperature compensated video amplifier
0 2 comprises:

1 a first filter stage having an input terminal adapted to receive said second RF signal and
0 2 an output terminal;
1 an attenuator having an input terminal coupled to the output terminal of said first filter
0 4 stage and having an output terminal, said attenuator comprising a temperature sensitive device;
1 5 and

6 a second filter stage having an input terminal coupled to the output terminal of the
7 attenuator and an output terminal at which an output signal of said video amplifier is provided.

1 16. The radar system of claim 15 wherein said receiver circuit further comprises an RF
2 amplifier having a gain which varies by a first predetermined amount with temperature and
3 wherein said attenuator provides a gain which varies by a second predetermined amount with
4 temperature, wherein said first and second predetermined amounts are substantially equal.

1 17. The radar system of claim 14 wherein each of said first filter stage and said second filter
2 stage has a bandpass characteristic.

1 18. The radar system of claim 17 wherein said second RF signal includes a portion of said
2 first RF signal and wherein said bandpass characteristic has a low frequency cutoff selected to
3 attenuate said portion of said first RF signal.

1 19. The radar system of claim 17 wherein said bandpass characteristic has a low frequency
2 cutoff selected to attenuate a received RF signal reflected by an object located more than a
3 predetermined distance from said radar system.

1 20. The radar system of claim 15 further comprising:
2 an analog-to-digital converter responsive to said output signal of said video amplifier for
3 providing a digital signal;

- 4 a temperature sensor for providing a signal indicative of the temperature of said receiver
- 5 circuit; and
- 6 a digital signal processor responsive to said temperature indicative signal for varying a
- 7 threshold used to process said digital signal.

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